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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/076,428	02/19/2002	Yi-Shan Chu	ACR0058-US	2308

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EXAMINER

LEE, WILSON

ART UNIT PAPER NUMBER

2821

DATE MAILED: 08/14/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application N .

10/076,428

Applicant(s)

CHU ET AL.

Examiner

Wilson Lee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period of Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 May 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Claim Rejections – 35 U.S.C. 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding Claims 1, 11 and 19, "one of the source/drain" and "the other of the source/drain" lack antecedent basis. Further, applicant is respectfully requested to choose either a source or a drain of the transistors for describing the connections of the claimed invention. The term "source/drain" has led to uncertainty of the claimed invention, since it can derive to a plurality of possible circuit arrangements that are totally different from each other.

Claims 2-10, 12-18 and 20-22 are vague by virtue of their dependency on the independent claims 1, 11 and 19.

Claim Rejections – 35 U.S.C. 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 3, 4, 9, 10, 19, 21, as best understood, are rejected under 35 U.S.C. 102(e) as being anticipated by Jacobs et al. (6,091,616).

Regarding Claim 1, Jacobs discloses an inverter comprising:

- a transformer;
- a first switch transistor (320) with a source electrically coupled to the primary side (S1) of the transformer (T1);
- a second switch transistor (315) with a drain electrically coupled to the primary side (S1) of the transformer (T1);
- a reset capacitor (325) (See Col. 9, lines 51-56) electrically coupled between the drain of the first switch transistor (320) and the source of the second switch transistor (315) (See Figure 3); and
- a control circuit (380) for generating two switch control signals in response to a voltage feedback signal representing the current value at the secondary side of the transformer (T1) and respectively outputting to the gate of the first switch transistor (320) and the gate of the second switch transistor (315) to thereby cause the first switch transistor (320) and the second switch transistor (315) not to conduct current at the same time.

Regarding Claim 3, Jacobs discloses a decoupling capacitor (C) electrically coupled to the secondary side of the transformer (T1) (See Figure 3).

Regarding Claim 4, discloses that the control circuit (380) comprises a driving circuit that utilizes the voltage across the reset capacitor (325) as driving power for generating the two switch control signals.

Regarding Claim 9, Jacobs discloses that the control circuit (380) further controls the current value at the secondary side the transformer according to a burst mode control signal (adjusts the switching cycle or non-conduction mode) (See Col. 9, lines 18-29 and Col. 11, lines 28-36).

Regarding Claim 10, Jacobs discloses that the control circuit (380) further renders both the first and the second switch transistors (320, 315) non-conducting during the interval (adjust switching cycle) between the conducting of the first switch transistor (320) and the conducting of the second switch transistor (315).

Regarding Claim 19, Jacobs discloses an inverter (See Figure 3), comprising:

- a transformer (T1);
- a first switch transistor (320) with a source electrically coupled to the primary side (S1) of the transformer (T1);
- a second switch transistor (315) with a drain electrically coupled to the primary side (S1) of the transformer (T1);
- a reset capacitor (325) (See Col. 9, lines 51-56) electrically coupled between a drain of the first switch transistor (320) and a source of the second switch transistor (315); and
- a control circuit (380) for controlling the first switch transistor (320) and the second switch transistor (315) not to conduct current at the same time.

Regarding Claim 21, Jacobs discloses that the control circuit (380) further renders both the first and the second switch transistors (320, 315) non-conducting

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during the interval between the conducting of the first switch transistor (320) and the conducting of the second switch transistor (315).

Claim Rejections – 35 U.S.C. 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 11, 13, 14 and 18, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Jacobs et al. (6,091,616).

Regarding Claim 11, Jacobs discloses an ignition system (See Figure 3), comprising:

- an inverter wherein the inverter comprising:
- a transformer (T1) with the secondary side thereof electrically coupled to the Vout (See Figure 3);
- a first switch transistor (320) with a source electrically coupled to the primary side (S1) of the transformer (T1);
- a second switch transistor (315) with a drain electrically coupled to the primary side (S1) of said transformer (T1);
- a reset capacitor (325) (See Col. 9, lines 51-56) electrically coupled between a drain of the first switch transistor (320) and a source of the second switch transistor (315); and

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- a control circuit (380) for generating two switch control signals in response to a voltage feedback signal representing the current value at the secondary side (S2) of the transformer (T1) and respectively outputting to the gate of the first switch transistor and the gate of said second switch transistor (315) to thereby cause the first switch transistor (320) and the second switch transistor (315) not to conduct current at the same time.

As discussed above, Jacobs essentially discloses the claimed invention but fails to explicitly disclose the load being a lamp. However, since Jacobs does not limit the choice of the specific load, the implementation of using such load (e.g. lamp) is not restricted or prohibited in his invention. It would have been obvious to one of ordinary skill in the art to adapt a lamp as a load in Jacobs in order to obtain a desired illumination by utilizing the voltage regulator of Jacobs.

Regarding Claim 13, Jacobs discloses a decoupling capacitor (C) electrically coupled to the secondary side of the transformer (T1) (See Figure 3).

Regarding Claim 14, Jacobs discloses that the control circuit (380) comprises a driving circuit that utilizes the voltage across the reset capacitor (325) as driving power for generating the two switch control signals.

Regarding Claim 18, Jacobs discloses that the control circuit (380) further controls the current value at the secondary side (S2) of the transformer (T1) according to a burst mode control signal (adjusts the switching cycle or non-conduction mode) (See Col. 9, lines 18-29 and Col. 11, lines 28-36).

Allowable subject matter

Claims 2, 5-8, 12, 15-17, 20 and 22 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Response to Arguments

Applicant's arguments with respect to claims 1-22 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Smith (6,295,213) discloses a circuit comprising a buck converter connected to a reset capacitor, a transformer, and a load. Boylan et al. (6,069,807) discloses a compensation circuit an inverter comprising a clamp capacitor, a transformer and a feedback circuit arrangement.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Wilson Lee whose telephone number is (703) 306-3426.

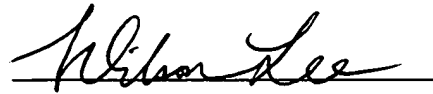
Any inquiry of a general nature or relating to the status of this application should be directed to the Technology Center receptionist whose telephone number is (703) 308-0956.

Papers related to Technology Center 2800 applications may be submitted to Technology Center 2800 by facsimile transmission. Any transmission not to be

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considered an official response must be clearly marked "DRAFT". The Technology

Center Fax number is (703) 308-7722 or (703) 308-7724.

A handwritten signature in black ink, appearing to read "Wilson Lee", written over a horizontal line.

Wilson Lee
Patent Examiner
U.S. Patent & Trademark Office

WL
8/11/03